

WIZARDSHIP, Instrument,

[V/A]

"Grinding of Hard Alloys", Stanki I Instrument, 14, No. 4-5, 1943.

BR-5205901%.

\* Excerpts from his report:

18.5200

S/123/60/000/012/004/006  
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1960, No. 12,  
p. 124, # 61327

AUTHOR: Kizel'shteyn, V. Ya.

TITLE: A Chemical-Mechanical Method of Metal Machining

PERIODICAL: V sb.: Elektr. i ul'trazvuk. metody obrabotki materialov.  
Leningrad, Lenisdat, 1958, pp. 150-175

TEXT: An account is given of the practice of applying a chemical-mechanical method of lapping steel and grinding hard alloys. An increase in efficiency with this method is attained on account of using corrosion processes. Chemical-mechanical lapping is achieved by using a paste containing surface active substances (sulfur, stearin, oleic acid), by which oxide films are formed, which are uninterruptedly removed from the machined surface. The machine tool used for this operation consists of a bed with face-plate, driving mechanism, glass polishing disk and appliances for the application of the paste and removal of the products of wear. The chemical-mechanical grinding of hard alloys is

Card 1/2

82661

S/123/60/000/012/004/006  
A004/A001

A Chemical-Mechanical Method of Metal Machining

effected with the aid of an electrolyte under the effect of which corrosion processes weaken the structure of the surface layer and make it possible to increase the grinding intensity. The corrosion processes arise owing to the surface heterogeneity of the hard alloy in electrochemical respect (the grains of tungsten carbide are electropositive centers, while the cobalt regions are electronegative). The machine tool for the grinding of hard-alloy bits is a tub, on the bottom of which the grinder is placed. Tub and grinder are set in rotation by an electromotor with the aid of a belt drive. The tub is filled with a copper sulfate solution to which an abrasive powder is added. The author describes the lapping and grinding conditions and states examples. There are 17 figures and 6 references.

B. I. M.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

5(2)

## PHASE I BOOK EXPLOITATION

SOV/3033

Kizel'shteyn, V. Ya.

*Primeneniye khimii v obrabotke metallov* (Application of Chemistry in Metal Finishing) [Leningrad] Lenizdat, 1959. 174 p. 5,000 copies printed.

Scientific Ed.: I. G. Kosmachev; Ed.: Ye. V. Yemel'yanova; Tech. Ed.: P. S. Smirnov.

**PURPOSE:** This book is intended for workers and engineers in machine manufacturing plants and institutes.

**COVERAGE:** The author describes the chemical media used in the mechanical finishing of metals, alloys, and tools. He also explains the various processes of finishing metals by chemicochemical methods used in the Soviet Union, and presents diagrams of equipment employed in the processes. No personalities are mentioned. There are 23 references: 20 Soviet and 3 English.

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SOV/3033

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110

Card 2/3

KIZEL'SHTEYN, Vladimir Yakovlevich; KOSMACHEV, I.O., retsenzent;  
SVERDOL M.B., retsenzent; STEPANOV, Ye.V., nauchn. red.;  
SMIRNOV, Yu.I., red.

[Chemical and mechanical methods of metal treatment] Khimiko-  
mekhanicheskaya obrabotka metallov. Leningrad, "Sudostroenie,"  
1964. 139 p. (MIRA 17:4)

ACC NR. AM6027413

Monograph

UR/

Kizel'shteyn, Vladimir Yakovlevich

Chemistry in metal treatment (Khimiya v obrabotke metallov) [Leningrad] Lenizdat, 1966; illus., bibliog. Errata slip inserted. 5000 copies printed.

TOPIC TAGS: electrolyte, sulfur, chemistry, chemical mechanics, metal polishing, metal machining, metal stamping, electrochemistry

PURPOSE AND COVERAGE: This book is intended for engineers, technicians and workmen of machine-building organizations. The book outlines the role of chemistry in metal working processes, and reviews specific features, advantages and disadvantages of chemical methods. Practices used in chemical treatment of metals are summarized.

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ACC NR: AM6027413

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References and sources -- 152

SUB CODE: 13,07/ SUBM DATE: 01Mar66/ ORIG REF: 020/ OTM REF: 004

Card 2/2

ZINCHENKO, Ye.D.; KIZENKO, A.F.

Pulverizer system for washing the filtration cake in vacuum filters.  
Sakh.prom. 37 no. 78 57-59 J1 '63. (MIRA 16:7)

1. L'govskiy sakharinyy zavod.  
(Filters and filtration)  
(Sugar manufacture)

KIENKO, L.M. [Kysenko, L.M.]; KOZLOVA, G.F. [Kozlova, H.F.]

Use of the universal RIU and RZh refractometer in determining  
the fat content of corn meal. Khar. prom. no.1:23-24 Ja-Mr  
'65. (MIRA 18:4)

DRUGOBITSKAYA, S.Y. [Druhotyts'ka, S.P.]; KUDERKO, L.M.; SKREBNIK, G.S.  
[Skrybnik, R.S.]

Modified methodology for determining aromatic substances in bread.  
Khar. prom. no.3433-34. JI-G '65. (MIRA 12:9)

KIZELVAL'TER, D. V.

BODANOV, O. S., KIZELVAL'TER, D. V., and MASLOVA, S. G. "On the effect of frothing agents on the rate of rise of air bubbles in flotation pulp", Nauch.-inform. byulleten' (Vsesoyuz. nauch.-issled. i proyekt. in-t mekhan. obrabotki poleznykh iskopayemykh), 1948, No. 2, p. 14-18.

SO: U-4393, 19 August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

KIZEVAL'TER, B. V.

USSR/Engineering - Ore Dressing  
Flotation

Mar 50

"The Effect of the Frothing Agent on the Air Content in Flotation Pulp," O. S. Bogdanov,  
B. V. Kizeval'ter, S. G. Maslova, Sci Res Inst of Mech Treatment of Ores, 51 pp.

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 3 p. 412 - 415

Describes experiments on subject and concludes frothing agent has definite influence  
on magnitude of air concentration in pulp by decreasing floating speed of bubbles and  
preventing their coalescence.

158T42

KIZEVAL'TER, B. V.

"Theoretical and Experimental Investigation of the Jigging of  
Pine Material." Cand Tech Sci, Leningrad Mining Inst, Leningrad, 1954.  
(RZhMekh, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical  
Dissertations Defended at USSR Higher Educational Institutions  
(14)

KIZLEVSKIY, D.V.  
BOGDANOV, O.S.; KIZLEVSKIY, D.V.; KHAYMAN, V.Ia.

Flootation rate equations. Psvet. met. 27 no.4:6-10 J1-4g '54.  
(MIRA 10.10)

1. Nauchno-issledovatel'sky institut mekhanicheskoy obrabotki  
polosnykh i akopayemykh.  
(Flootation)

BOGDANOV, O.S., KIZNEVSKII, B.V., KHAYMAN, V.Ya.

About the article "Kinetic equations of the flotation process".  
Tsvet.met.29 no.6:83 Je '56. (MIRA 9:9)  
(Flotation)

SOV/137-59-2-2764

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 2, p 68 (USSR)

AUTHOR: Kizeval'ter, B. V.

TITLE: Research Work of the Mekhanobr Institute (Scientific Research Institute for Mechanical Concentration of Minerals) on Gravitational Concentration Processes (Issledovatel'skiye raboty instituta Mekhanobr v oblasti gravitatsionnykh protsessov obogashcheniya)

PERIODICAL: Obogashcheniye rud, 1957<sup>2</sup>, Nr 5, pp 16-19

ABSTRACT: A brief survey of works carried out by the Institute during the period from 1917 to 1957.

M. M.

Card 1/1

KIZNEVITIN, B.V., kandidat tekhnicheskikh nauk.

Loosening the layer of particles in the jiggling process. Gor. zhur.  
no.3:61-67 Mr '57.  
(MLRA 10:4)

1. Mekhanobr.  
(Ore dressing)

KIZEL'VATER, B.V.

**Effect of the number and amplitude of fluid vibrations on the  
jigging process. Obog.rnd 3 no.5:14-21 '58. (MIRA 12:5)  
(Ore dressing)**

KIZZEL'TER, B.V.

Determining the rate of the hindered settling of particles by the circulation method. Obeg. rad 7 no. 3:24-28 '62. (MIRA 16:4)  
(Ore dressing)

KIVEVAL'YEN, D.G., SHMETKIN, N.K.

Comparative characteristics of Middle Paleozoic volcanic complexes  
in the Western Caucasus. Biol. MZ. Otd. geol. 39 no.4:114-129  
(MIRA 17:10)

KIZEVAL'TER, D.S.

Discovery of Lower Carboniferous conglomerates in the  
Northern Caucasus. Dokl. AN SSSR 156 no.6:1343-1346  
Je '64. (MIRA 17:8)

1. Moskovskiy geologorazvedochnyy institut imeni Ordzhonikidze.  
Predstavleno akademikom A.L. Yanshiym.

VYSOTSKIY, B.P.; REZANOV, I.A.; KIZEVAL'TER, D.S.

Reviews and discussions, Izv. AN SSSR. Ser. Geol. 30 no.4:130-146  
Ap '65. (MIRA 18:4)

1. Geologicheskiy institut AN SSSR, Moskva (for Vysotskiy).
2. Institut fiziki Zemli AN SSSR, Moskva (for Rezanov).
3. Geologorazvedochnyy institut im. S. Ordzhonikidze, Moskva  
(for Kizeval'ter).

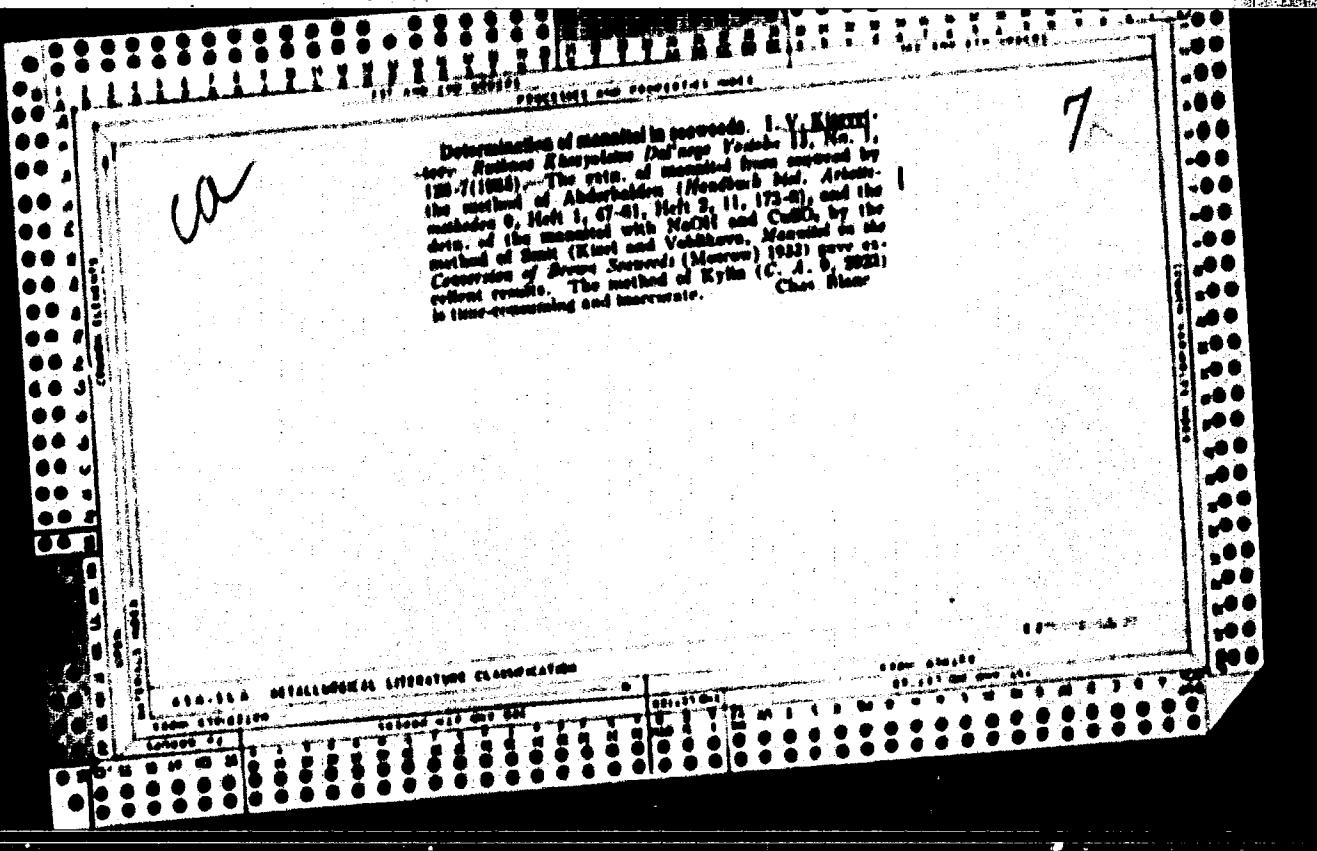
KIZEVAL'TER, D.S.

Age of the Karachay series (northern Caucasus). Sov. geol. 8  
no. 8:146-151 Ag '65. (MIRA 18:10)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.

SYROMYATNIKOVA, Mariya Grigor'yevna; KIZEVETTER, I.S., otr.red.

[Methods of microbiological and sanitary study of  
fishery products] Metody mikrobiologicheskikh i sanitarnykh issledovanii rybnykh produktov. Vladivostok, Dal'niovostochnoe knizhnoe izd-vo, 1964. 159 p. (MIRA 18:12)



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29

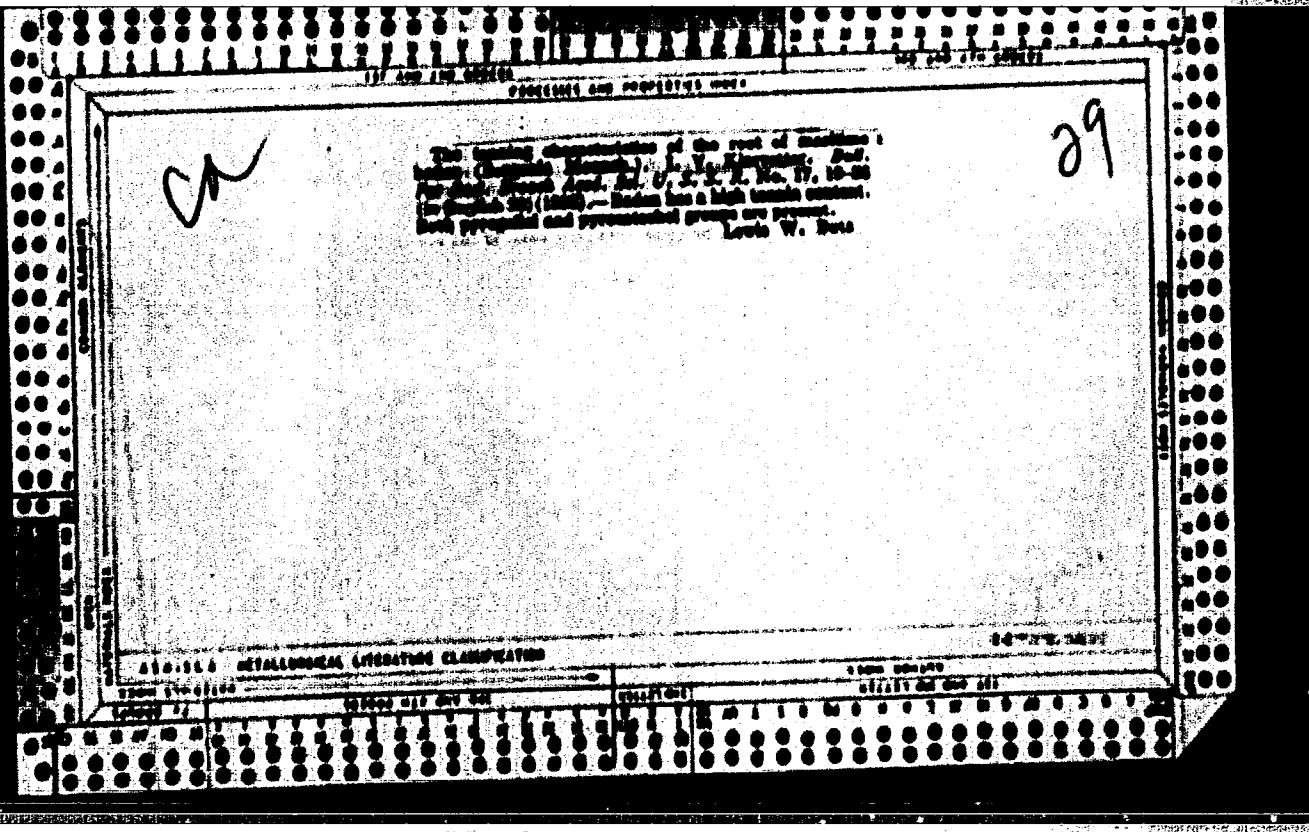
Vegetable tanning materials of the Far Eastern region.  
V. Khar'kov. Sov. For. Res. Inst. Acad. Sci. SSSR. No. 67-79 (in English 79) (1968). Among the large resources of tannin-bearing trees of the region are cedar woods, 30-37% tannin, willow, fir trees and oak. The wood and bark of the Mongolian oak contains less tanning materials than the species of other parts of the Union. Species of willow with a medium content of tanning materials may be an abundant source of tan and can be cultivated in places unsuitable for other plantation cultures.

(Bot. Zhur.)

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

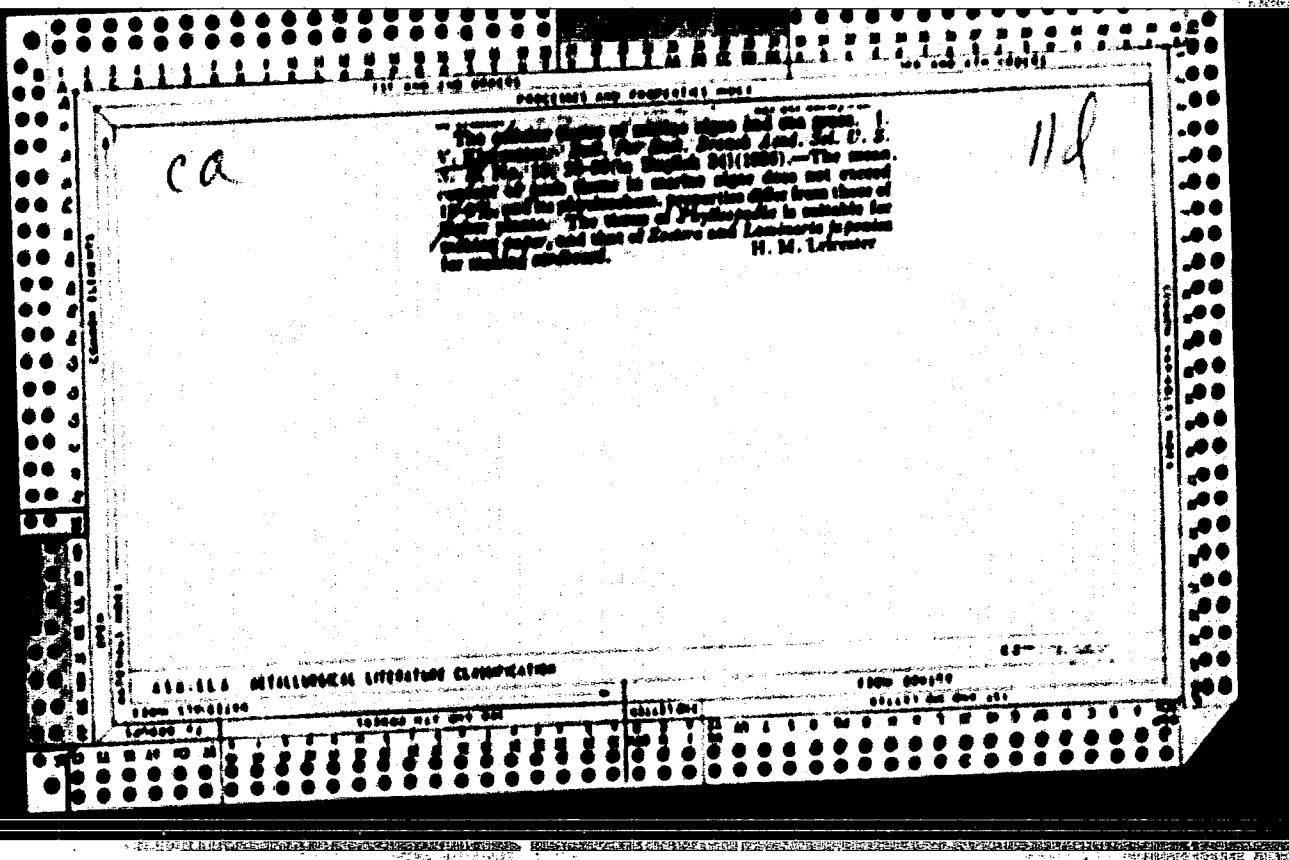
"APPROVED FOR RELEASE: 09/17/2001

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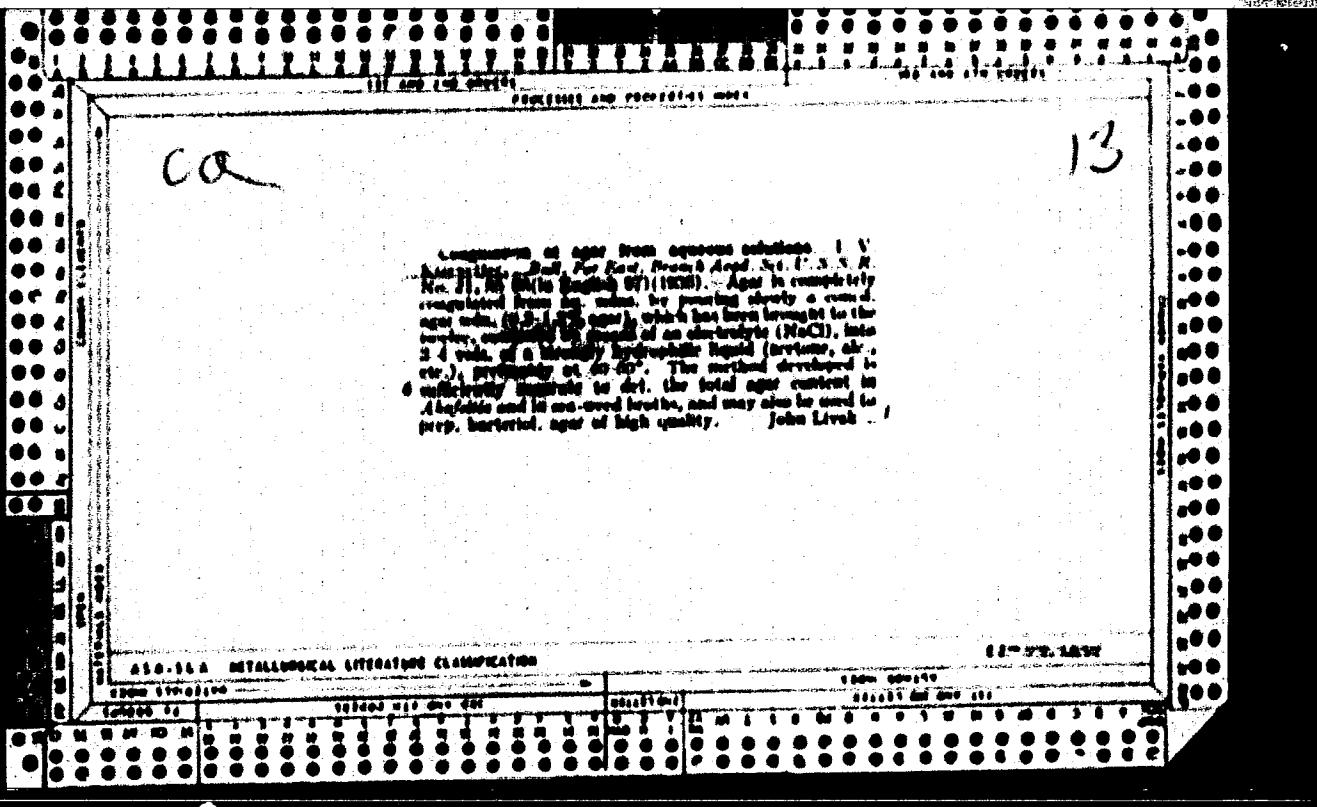
18

Chemical composition of the observed Lanthanum  
isotopes, V. Klimovskaya, *Zem. Fiz. Probl.*  
Arct. Antarkt., No. 10, 71 pp. (1968). The soil  
also contains 20.26% of iron, and 60.85% of arg. matter.  
The water and salts contain up to 0.05, K<sub>2</sub>O and 0.27  
0.72% I. The content of iron salts decreases from the  
water to summer months and that of arg. matter and I  
increases. In agreement with other investigations, the  
plant contains boron, manganese and chlorine in varying  
proportions. (See Note)

APPENDIX 1.4. INFORMATIONAL ATTACHMENT

ca  
18

Lichenized composition of the Rhodophyceae of the Maritime Province. J. V. Krikken. Bull. Far East Forest Acad. Inst. U.S.S.R., No. 28, 57-73 (in Russian) 74 (1962). - Vladivostok, Khimzinsk, Tumansk, Primorskaia, Irkutsk and Purple of the class Rhodophyceae differ in their chro. complex, from the Phaeophyceae by the presence of meso- and the higher content of al. haemato- and caroteno-phytins. All of them are prokaryotes, protoperistomata, and some of them is capable for the production of agar-agar or for excretion of SiO<sub>2</sub> and Fe. Almost 300 references.



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16

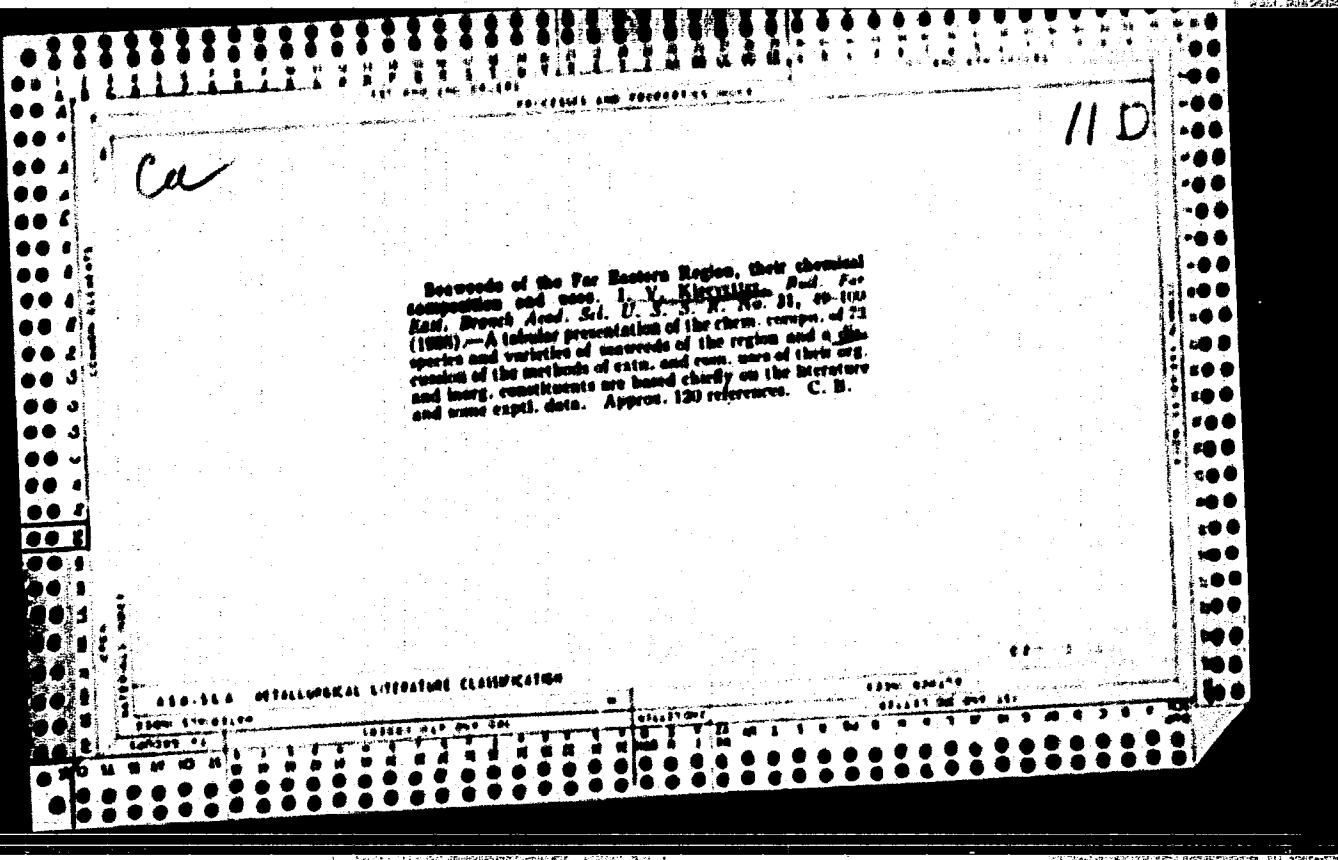
Fermentation of seaweeds (*Laminaria japonica*). A. Gómez and J. V. Kierster, *Bull. Soc. Arg. Quím.* 30, 17-21, 63-64 (1952). The preliminary tests in the fermentation of *Laminaria japonica*, *Laminaria digitata* and *Laminaria bullata* by inoculation of sterilized media with pure cultures of bacteria and by spontaneous decays, of unfermented seaweeds through the heterotrophic process on the plants are described. The fermentation proceeds only in the presence of  $\text{CaCO}_3$ . The "wild" fermentation is more effective, resulting mainly in the decays of mannitol. The process is accelerated by increased aeration and temp. ( $35^\circ$ ). The cellulose and lignin acid are decomposed, but little and the carbohydrates practically not at all. Because of poor yields of org. acids, *Laminaria japonica* is unsuitable for industrial fermentation. About 16 references. C. B.

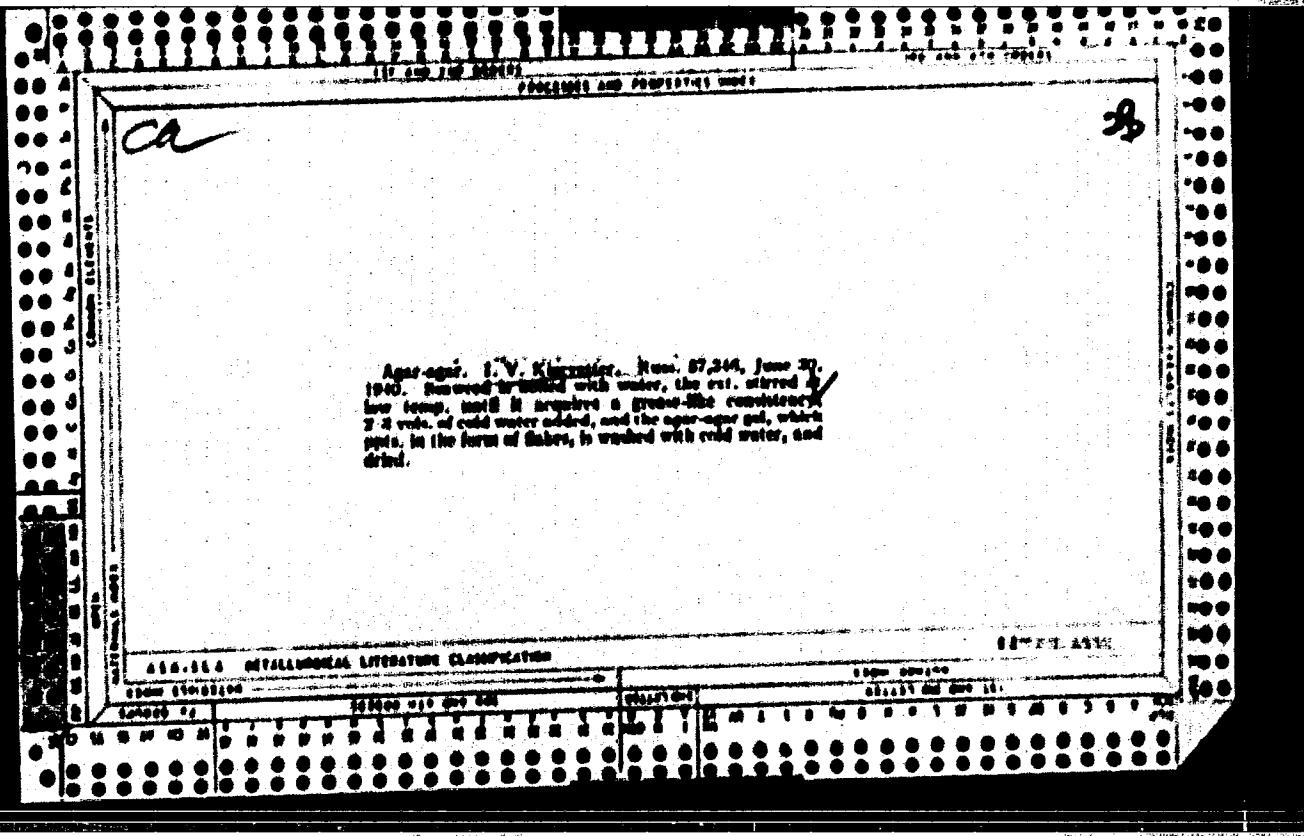
## ATA-SEA METALLURGICAL LITERATURE CLASSIFICATION

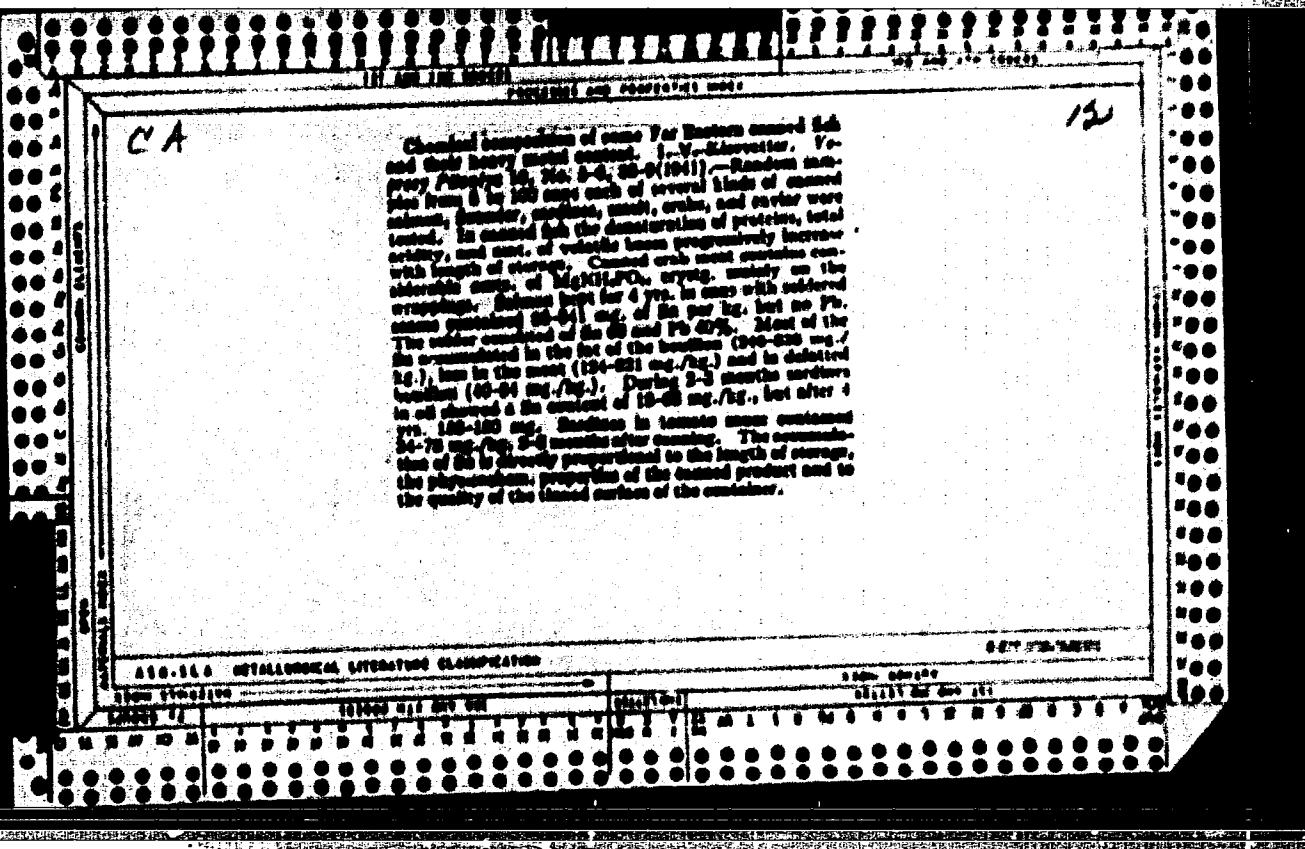
CLASSIFICATION OF METALLURGICAL LITERATURE

Comparative physicochemical characteristics of agar-  
agars of different origin. I. V. Kipovits, Radi. For.  
Inst. Biotech Acad. Sci. U.S.S.R. No. 26, 33 pp. in Eng.  
Abstr. 71(1957).—Agar-agar from Abagofus of Japanese  
and Maritime coasts and the White Sea, from Phyto-  
spores of the Black Sea and from Ireland are compared as  
to their phys. and chem. properties. Conclusion: The  
Maritime grade ranks highest in technological application.  
G. I. Makovsky  
Thirty-four references.

METALLURGICAL LITERATURE CLASSIFICATION







26

The maritime wood *Aleurites* plants as raw material for the agar-agar industry. J. V. Klingsberg. J. Applied Chem. (U. S. S. R.) 14, 237-239 (1961). This plant is found in large masses in the Maritime Provinces of East-Baffin U. S. S. R. Live plants contain up to 25% agar-agar; dried plants 13-13%. Owing to bacterial action agar-agar and nitrogenous matter are progressively destroyed. A small tendency was found for increase in agar-agar during February and March. The total organic matter in the plant is 16.17% on fresh samples, and 14.1% on dried. Org. matter is represented by polysaccharides, hemicellulose, protein, tannins and pigments. Proteins were found to be present but not mono- or disaccharides, nor mannose. Acid hydrolysate yields glucose 8.67%, galactose 4.97%, proteins 1.87%, methylpentose 0.27%, total reducing matter 14.16%. The cellulose structure of the plant (the contents of which ranges from 13.2 to 18.4% on dry wt.) differs from cellulose of land plants, being extremely poorly act. in Schiffs reagent; H content 10.9%  $\alpha$ -cellulose, 1.4%  $\beta$ -cellulose and 1.0%  $\gamma$ -cellulose (calcd. on plant weight). Total N is 0.84% av., with a seasonal minimum in May-June and a November. Over 80% of N cannot be hydrolysed by protein. Hydrolysis by 20% HgCl<sub>2</sub> showed N distribution as 0.58% as NH<sub>4</sub> nitropro, 1.04% N in nitrogenous bound (?) and 2.82% inorganic N. Most of the mineral matter consists of salts of K and Ca.

O. M. Kowaleff

## A.I.R.-I.A METALLURGICAL LITERATURE CLASSIFICATION

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C	CO	C	CO																						
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52

KIZEVETTER, I.V.

KIZEVETTER, IV. Morskie bogatstva Primor'ia i ikh ispol'zovanie. Vladivostok, Primizdat, 1947. 36 p.

So: LC, Soviet Geography, Part II, 1951/Unclassified.

12

Technical and chemical characteristics of canned salmon trout from the Far East. In: *Biologia Ryb i Rybactwo*, No. A, 22-23 (1981); *Coral Zrcan, (Korall-Zrcan)*, No. 1, 1981. Of the 85-110 mm. fish examined, 77.5% showed a variance of 220-400 mm. Only 31% showed a lower variance. Long storage of the fish before canning, even though frozen, tended to cause deterioration. In such cases the amt. of fat wpp during sterilization (normally about 20%) was increased. The nutritive value of the canned fish depended in large part on the particular variety of fish. Protein values were 15.31% and fat 2.1-12.6%. There was a direct relation between the amt. of fat absorbed by the contents of the can and the period of storage. After storing 4 months 10.6-17.0 mg. fat was absorbed per kg. of can contents; after 8 months, 21.6-128.3; and after 18 months, 48.4-841 mg. per kg. The fat absorbed by the various fractions of the can contents is reported as follows (in mg. fat per kg.): the flesh 132-221, the bones 41-81, and the fat present in the figure 246-336. No fat could be detected after storing for 4 years. S. G. Miron

УДК 651.515.7:1.2

29181 Bol'she vnutrniya ispol'zovan'yu nerybnykh ob'ektov. Ryb.  
Khoz-vo, 1949, No. 9, s. 25-26.

70: Letopis' Zhurnal'nykh Statey, Vol. 39, Moscow, 1949

KIZEVITER, I. V.

Kizeviter, I. V. - "The technological characteristics of 'mintay'", Izvestiya  
Tikhookean. nauch.-issled. in-ta ryb. khoz-va i okeanografii, Vol. XXIX, 1949,  
p. 67-78.

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey; No. 1, 1949).

KIESEVETTER, I.V.

~~Sakhalin and Kurile Islands Ahnfeltia, as a raw material for agar.~~  
Scob. Prim. otd. VNIIO no. 1:23-33 '51.  
~~(MIRA 11:2)~~  
(Sakhalin--Ahnfeltia) (Kurile Islands--Agar)

KIZEVETTER, I.V.; LAGOVSKAYA, Ye.A.

Vitamin A content of fishes of the Far East. Vit. res. i 1kh 1sp.  
no.1;71-138 '51.  
(**FAR EAST--FISHES**) (**VITAMINS--A**)  
(MLRA 8:12)

KIZEVETTER, I.V.; LAGOVSKAYA, Ye.A.

Vitamin A content of Siberian fish. Vit.res. 1 ikh isp. no.1:216-  
221 '51.  
(VITAMINS--A)(SIBERIA--FISHES)

(MIRA 8:12)

~~KC INVITATION~~

Physical and chemical properties of Sakhalin and Kurile Islands agar.  
Sob. Prim. otd. VKhO no.1:35-43 '51.: (MIRA 11:2)  
(Sakhalin-Agar) (Kurile Islands-Agar)

KIZEVETTER, I.V.

Fishery Products--Preservation

Urgent tasks in the modernization of salmon-canning industry. Ryb. khoz. 28, no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, AUGUST 1952 1953. Unclassified.

KIZSEVETTER, I. V.

Zhivotnye morskikh mlekopitayushchikh /Fauna of marine mammals/. Vladivostok, Primorskoe izd-vo  
1953. 104 p

80: Monthly List of Russian Accessions, Vol 6 No 8 November 1953

KIZEVETTER, I. V.

USSR/Biology - Marine products

Card 1/1      Pub. 86 - 15/40

Authors      I. V. Kizevetter, Prof.

Title      Agar-agar

Periodical : Priroda 13/4, 81-85, Apr 1954

Abstract : A descriptive account of the properties of agar-agar obtained from the marine plant called Rhodophyceae in the Soviet Union, where it is used as a food ingredient and in laboratory work. It is claimed that the Soviet Union leads in the production of agar-agar since whole mechanized factories are devoted to its production. One Russian reference (1952).

Institution : ....

Submitted : ....

KIVSEVETTER, I. V. (Prof.)

USSR/Biology - Marine flora

Card 1/1 : Pub. 86 - 4/30

Authors : Kivsevettter, I. V., Prof.

Title : Vegetation wealth of our seas

Periodical : Priroda 43/8, 30 - 36, Aug 1954

Abstract : The growth of vegetation in salt and fresh water is dealt with, especially with regard to the researches made in connection with such growth in waters of the Soviet Union. Submarine vegetation is found to be of industrial importance because of certain elements found in it, such as potassium, iodine and phosphorus. Products from sea vegetation are found to have special medicinal value and to be a source of food. Importance is attached to sea-cole in this respect. Illustration.

Institution : .....

Submitted : .....

Chemical composition of cooking salt obtained from sea water at V. V. Krasnaya Luka, Far East, Russia, by V. I. Chikishev, TIEF, Novosibirsk, USSR, No. 1, 53-6. Analyses of salt produced there were carried out by the fish industry in the Far East are presented. The salt is characterized by large quantities of water. Its bulk density (damped) is 1.034 g/cm<sup>3</sup>, and its salt of Burgess content. The salt contains 3.5% of the crystal structure and 6.5% of the mineral matter. The content of major ions in the salt was as follows: Na<sup>+</sup>, 40.0%; K<sup>+</sup>, 0.005%; Ca<sup>2+</sup>, 0.005%; Mg<sup>2+</sup>, 0.005%; SO<sub>4</sub><sup>2-</sup>, 0.005%; Cl<sup>-</sup>, 40.0%; Br<sup>-</sup>, 0.005%; HCO<sub>3</sub><sup>-</sup>, 0.005%; and NO<sub>3</sub><sup>-</sup>, 0.005%. The amount of K<sup>+</sup> varied from 0.005 to 0.015%, which shows that the salts of K, sulfate, and minor matter varied directly, as did the salts of Mg and sulfate. The salts of K and Mg varied inversely. A high content of sand matter is the result of improper removal of gypsum from the brine. Sand matter can be introduced into the brine from gypsum bodies in which the brine is born. R. P. [signature]

KIZNETTER, I.V.

Glycogen content of the flesh of fish, crustacea, and  
mollusks. Soob.Prim.otd.VKBO no.3:159-164 '57.  
(MIRA 13:6)

1. Kafedra tekhnologii rybnykh produktov Dal'rybvtusa.  
(Glycogen)

KIZNETZER, I.V.

Chemical elements contained in the mineral substances of  
the meat of food fish, mollusks, and crustacean. Soob.  
Prim. otd. VKhO no. 3:165-196 '57. (MIRA 13:6)

1. Kafedra tekhnologii rybnykh produktov Dal'rybvtusa.  
(Fish as food) (Crustacea) (Mollusks)

TSAPKO, A.S., stv. red.; GLIKMAN, S.A., doktor khim. nauk, prof., red.; GEMP, K.P., stv. nauchn. sotr., red.; GRYUNER, V.S., doktor tekhn. nauk, red.; DANILOV, S.N., red.; YEVETUSHENKO, V.A., kand. khim. nauk, red.; ZINNOVA, A.D., kand. biol. nauk, red.; KIZEVETTER, I.V., doktor tekhn. nauk, red.; KIREYEVA, M.S., kand. biol. nauk, red.; VULIKHMAN, M.A., red.; POTEKHIN, L.P., red.

[Transactions of the First All-Union Conference of Workers in the Algal Industry of the U.S.S.R.] Trudy Pervogo Vsesoyuznogo nauchno-tehnicheskogo soveshchaniia po vodoroslevoi promyshlennosti SSSR. Arkhangel'sk, Arkhangel'skoe knishnoe izd-vo. Vol.1. 1962. 214 p. (MIRA 17:12)

1. Vsesoyuznoye soveshchaniye rabotnikov vodoroslevoy promyshlennosti SSSR. 1st. 2. Chlen-korrespondent AN SSSR (for Danilov). 3. Vsesoyuznyy nauchnyy institut morskogo rybnogo khozyaystva i okeanografii (for Kireyeva). 4. Nachal'nik Upravleniya rybnoy promyshlennosti Arkhangel'skogo sovnar-khoza (for TSapko). 5. Saratovskiy gosudarstvennyy universiteta im. N.G.Chernyshevskogo (for Glikman).

OSIPOV, V.G.; KIZEVETTER, I.V.; ZHURAVLEV, A.V.; SUCHKOV, A.I.,  
spets. red.; KORZHOOVA, Yu.A., spets. red.; KAMENSKAYA,  
Ye.A., red.

[Tuna fish and swordfish of the Pacific and Indian Oceans]  
Tuntsy i mocheobraznye Tikhogo i Indiiskogo okeanov. Mo-  
skva, Izd-vo "Pishchevaya promyshlennost", 1964. 72 p.  
(MIRA 17:8)

KIEVETTER, Igor' Vladimirovich; IANIN, K.I., etv. red.

[Fishing and processing commercial invertebrates of  
the Far Eastern seas] Lov i obrabotka promyslovykh  
bespozvonochnykh dal'nevostochnykh morei. Vladivostok,  
Primorskoe knizhnoe izd-vlo, 1963. 222 p.

(MIRA 17:11)

OSIPOV, V.G.; DOLBISH, V.S.; KIZEVETTER, I.V.; STEPANOV, I.N.,  
red.

[Tuna fish] Tuntay. Vladivostok, Tikhookeanskii in-t  
rybnogo khoz. i okeanografii, 1963. 68 p. (MIRA 17:4)

ALEKSANDROV, O.N., kand.tekhn.nauk; KIZEVETTER, V.Ye., inzh.

Development of a discharge along the conducting surface of the  
high-voltage insulation of electrical networks. Isv.vys.ucheb.  
zav.; energ. 3 no.5:20-27 My '62. (MIRA 15:5)

1. leningradskiy politekhnicheskiy institut imeni M.I.Kalinina.  
Predstavlena kafedroy tekhniki vysokikh napryazheniy.  
(Electric power distribution)  
(Xlectric insulators and insulation)

ALEKSANDROV, O.N., kand.tekhn.nauk; KIZEVETTER, V.Ye., inzh.

Statistical studies of the electrical strength of contaminated insulation. Elek. sta. 35 no. 4:70-73 Ap '64. (MIRA 17:7)

"APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722930001-7

ALEKSANDROV, O.N., kand.tekhn.nauk; KIZEVETTER, V.Ye., insh.

Study of the electrical strength of long suspension insulator  
chains at ordinary potentials. Elektrotehnika 36 no.10:55-58  
O '65.

(MIRA 18:10)

APPROVED FOR RELEASE: 09/17/2001

CIA-RDP86-00513R000722930001-7"

ACC NR: A16013617

SOURCE CODE: UR/0105/65/000/011/0026/0026

AUTHOR: Vul'duk, A. I.; Domanskiy, B. I.; Drannikov, V. S.; Zaleskiy, A. N.; Kamenskiy, M. K.; Kantan, V. V.; Kashkarov, G. Ye.; Kizevetter, Ye. I.; Klimov, A. N.; Kovalev, N. N.; Kostenko, M. P.; Kostenko, M. V.; Nejman, L. R.; Pavlov, G. M.; Radvonik, V. S.; Rusin, Ya. L.; Sidorov, M. M.; Shramkov, Ye. G.

ORG: none

TITLE: Professor Sergey Vasil'yevich Usov, on his 60th birthday

SOURCE: Elektrичество, no. 11, 1965, 86

TOPIC TAGS: academic personnel, electric engineering personnel, electric power plant

ABSTRACT: The noted Soviet power specialist Professor S. V. USOV, who was 60 years old last September, graduated from the Leningradskij elektrotehnicheskiy institut (Leningrad Electrotechnical Institute) in 1930 and then, for the next twenty years, worked for the Lenenergo power system of which he became chief engineer in 1939. During the blockade of Leningrad he was head of the group which in 45 days managed to connect the beleaguered city with the Volkovskaya hydroelectric station across the frozen Ladoga lake. He also carried out the adaptation of the boilers of the Leningrad thermal power plant to consume the locally available fuel. In 1949 he became professor and head of the Department of Electric Stations.

Card 1/2

UDC: 621.311.1

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ACC NR: AP6013617

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of the Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute) im. Kalinin. In addition to his fruitful pedagogical endeavors, he published 50 scientific papers. From 1955 to 1958 he was a deputy director for scientific work. In 1964 he was elected Dean of the Electromechanical Faculty of the Institute. He joined the Party in 1942; from 1943 to 1955 was deputy president of the central board of the NTOEP /Nauchno-tekhnicheskoye obshchestvo energeticheskoy promyshlennosti; Scientific Engineering Society of Power Industries/, president of the section of power systems of NTOEP, and member of numerous scientific-engineering councils. For many years he was a member of the editorial board of the journal Elektricheskiye stantsii (Electric Stations). For his contributions in the field of power engineering S. V. USOV was awarded the Order of Lenin, Order of Red Banner of Labor, Order of Red Star, Badge of Distinction, and the medals: "For the Defense of Leningrad" and "For Distinguished Service During the Patriotic War." Orig. art. has 1 figure. [JPRS]

SUB CODE: 10. / SUBM DATE: none

Card 2/2 B1Q

VOL'DEK, A.I.; DOMANSKIY, B.I.; DRANNIKOV, V.S.; ZALESSKIY, A.M.;  
KAMENSKIY, M.K.; KANTAN, V.V.; KASHKAROV, G.Ye.; KIZEVETTER, Ye.I.; TOP SECRET  
KLIMOV, A.N.; KOVALEV, N.N.; KOSTENKO, M.P.; KOSTENKO, M.V.;  
NEYMAN, L.R.; PAVLOV, G.M.; RAVDONIK, V.S.; RYZIN, Ya.L.;  
SIDOROV, M.M.; SHRAMKOV, Ye.G.

Professor Sergei Vasil'evich Usov, 1905- ; on his 60th birthday.  
Elektrичество no.11:86 N '65. (MIRA 18:11)

SENCHINOV, Aleksey Matveyevich; NIZEVETTER, Ye.N., dots., retsensent;  
KRASNODORODTSEV, S.A., red.

[Current conductors of industrial enterprises] Tokoprovody  
promyshlennykh predpriatii. Moskva, Energiia, 1964. 215 p.  
(MIRA 17:10)

KISEVAL'TER, D. S.

45-67-5-6133

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,  
p 63 (USSR)

AUTHOR: Kiseval'ter, D. S.

TITLE: Albition in the Precambrian Crystalline Schists  
of the Northern Caucasus (O yavleniyakh al'bitezatsii  
v kristallicheskikh slantsakh dokembriya Severnogo  
Kavkaza)

PERIODICAL: Tr. Mosk. geol-razved. in-ta, 1956, Vol 29, pp 124-133.

ABSTRACT: The author has distinguished the Shaukol'skaya svita  
(series) among the complex Precambrian crystalline  
schists of the northern Caucasus. The rocks are charac-  
terized by strong albition, which has completely  
altered their outward appearance. The series is  
composed of coarse-grained light gray or dark gray  
schists, commonly containing porphyroblastic albite,  
which locally almost completely replaces the primary  
minerals of the schists. The porphyroblastic albite  
is present in all the varieties of schist in the series:

Card 1/3

15-57-5-6133

## Albitization in the Precambrian Crystalline Schists (Cont.)

chlorite-muscovite-quartz, muscovite-quartz, chlorite-quartz, epidote-chlorite, muscovite-biotite, quartz-feldspar, actinolite-epidote, and others. The fine-crystalline mass between the albite porphyroblasts and within the crystals themselves is very similar in composition and texture to the matrix in the schists of the Precambrian Baksan series, but is distinguished by this modification of the primary dynamic metamorphism due to intense albitization. The albite in the porphyroblasts is very fresh, generally untwinned, and contains up to three percent of the anorthite molecule. The size of the porphyroblasts ranges widely. It is common to find zones of secondary shearing in the albitized schists, with the formation of stretched albite porphyroblasts. It is of interest that tourmaline is widely associated with the albite. Variation in the degree of albitization attests to a relationship between albite formation and the introduction of new material. The albitisation consisted of metasomatic recrystallization of albite, chiefly from potassium mica and albite. The presence of albitized schists in the Precambrian rocks points to the extensive occurrence of magmatic activity in the central part of the northern slope of the Caucasus. The reason for Card 2/3

Abitization in the Precambrian Crystalline Schists (Cont.) 16-57-5-6133

the restriction of albitization to definite series and for the  
presence of non-albitized schists at depth is not clear.  
Card 3/3

O. B. V.

## AUTHORS:

Kiseval'ter, D. S., Milanovskiy, Ye. Ye., Belov, A. A.  
Lomize, N. G.

20-119-1-39/52

## TITLE:

New Data on the Age of the Lower Carboniferous Stratum in the Central Part of North Kavkaz (North Caucasus) (Novyye dannyye o vorraste nizhnekamenougol'noy tolshchi v tsentral'noy chasti Severnogo Kavkaza)

## PERIODICAL:

Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 1, pp. 143-145  
(USSR)

## ABSTRACT:

As the Paleozoic deposits of the Great Kavkaz (Caucasus) are paleontologically extremely little characterized, every new discovery of fossil organisms attracts attention. Data of this kind are especially rare for the Central Kavkaz (Refs 1, 2, 7). Here the problem of the age of a thick mass of volcanogenic rocks, arkillaceous schists and limestones which form the Peredovoy chain between the rivers Baksan and Teberda is especially interesting. For several reasons they are considered Lower Carboniferous. The 3 series separated by Robinson in the year 1947 (Ref 6) as well as the above-mentioned age determination are fairly weakly found.

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New Data on the Age of the Lower Carboniferous Stratum in the Central Part of North Kavkaz (North Caucasus)  
APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722930001-7

ed. Still weaker is the subdivision of these deposits in stages by Robinson. Thus the data on the Lower Carboniferous age of this mass in the Central Kavkaz are virtually absent. Numerous doubts remained especially with regard to the age of the volcanogenic mass, the more that under the conditions of a very complicated structure the continuity of the cross section of the 3 series was not determined. Kiseval'ter (Ref 3) determined the continuity of the cross section of the middle and upper series in the year 1946-47. He suggested considerable rearrangements in Robinson's scheme. The age, however, still remained determined according to the stratigraphic position. In the year 1955 the deposits under review were studied by the Kavkaz-expedition of the Moscow State University and the Moscow Geological-Prospecting Institute. Kiseval'ter's data were confirmed and somewhat detailed, and some paleontological discoveries were made. Most interesting are finds of Rugosa-corals in the carbonate mass of the Carboniferous which occurs in the divide region of the Peredovoy chain (Baksan river basin), further of stromatoporoids and straight nautiloidea. Because

Card 2/3

NIKOLAEV, N.I.; BABAK, V.I.; KATS, Ya.O.; KIXEL'VATEL', D.S.; MIKITINA,  
M.I.; PAVLINOV, V.N.; PAISOVA, E.K.; PEREPISKINA, S.M.; RYNOVA,  
A.A.; SAPOZHNIKOV, D.G.

"Principles of structural geology and geological mapping" by  
A.N.Mikhailov. Reviewed by N.I.Nikolaev and others. Izv.vys.  
ucheb.sav.; geol.i rasv. 2 no.11:125-127 N '59.  
(MIRA 13:6)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze.  
(Geology, Structural—Maps) (Mikhailov, A.N.)

3(5)

SOV/11-59-5-2/14

AUTHORS: Kizeval'ter, D.S. and Muratov N.V.

TITLE: The Protracted Development of Geosynclinal Folded Structures of the Eastern Part of the Gornyy Krym.  
(Dlitel'noye razvitiye geosinklinal'nykh sklad-chatykh struktur vostochnoy chasti Gornogo Kryma.)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 5, pp 16-34 (USSR)

ABSTRACT: Academician N.B. Shatskiy, has proved the existence of a protracted development of folding structures of the Donets Basin, as did V.I. Popov, for Central Asia. Now the author shows, using the structures of the eastern part of the Crimean mountains as an example that a protracted fold formation is the basic process in folded structure formation. Phases of folding, showing non-conformity, are not connected with folding processes but are the result of either elevation or sinking of the earth's crust. The Sudak synclinorium is composed of a continuous

Card 1/2

COV/11-59-5-2/14

The Protracted Development of Geosynclinal Folded Structures of  
the Eastern Part of the Gornyy Krym.

Complex of deposits stretching in time from the Bathonian up to the Tithonian stages. The East Crimean synclinorium is also composed of rock, a continuus folding formation of which stretched from the Kimmeridgian up to the Paleogene stage. A detailed study of all formations shows the protracted process of linear type folding, according to V.V. Belousov. The following geologists are cited by the author: V.Ye. Khain, G.I. Nenkov, I.V. Arkhipov, M.V. Mikhaylova, Ye.A. Uspenskaya, N.V. Muratov, V.D. Sokolov, N.A. Preobrazhenskiy, A.V. Peyve, and D.S. Kizel vator. There are 6 maps, 6 profiles and 13 Soviet references.

ASSOCIATION: Moskovskiy geologorazvedochnyy institut. (The Moscow Geologic Prospecting Institute).  
SUBMITTED: July 28 1958  
Card 2/2

KIZVAL'TER, D.S.

Age of Paleozoic limestones of the Dzhentu Range (Northern Caucasus).  
Dokl. AN SSSR 148 no.5:1159-1161 P '63. (MIRA 16:3)

I. Moskovskiy geologorazvedochnyy institut im. S.Ordzonikidze.  
Predstavleno akademikom A.L.Yanashinym.  
(Dzhentu Range—Geology, Stratigraphic)

GOVIL'EV, I. S., GUL'DAMOV, V. I., MATEYEV, P. N., FOMINAYA, I. A.,  
GOVIL'EV, N. N., FEKTSOVSKAYA, N. I., KASTINOV, N. I., LEBDEVA, M. V., KICHENKO,  
N. G., VASIL'KOVA, Z. S., RUDZHABIDAE, G. SH., OSSEVA, YU. I., KILESC, V. A.

"Hygienic evaluation of the experience of rendering harmless the  
drainage waters on agricultural lands."

report submitted at the 13 All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1959.

ALEKSANDROV, G.N., kand.tekhn.nauk (Leningrad); KIZEVETTER, V.Ye.,  
inzh. (Leningrad); RUDAKOVA, V.M., inzh. (Leningrad);  
TUSHNOV, A.N. (Leningrad)

A.c. flashover voltages of long air clearances and insulator  
chains. Elektrичество no.5:27-32 My '62. (MIRA 15:5)  
(Electric lines—Poles and towers)

ALEKSANDROV, G.N., kand.tekhn.nauk; KIZEVETTER, V.Ye., inzh.

Development of a discharge along the conducting surface of the  
high-voltage insulation of electrical networks. Izv.vys.ucheb.  
zav.; energ. 5 no.5:20-27 My '62. (MIRA 15:5)

1. Leningradskiy politekhnicheskiy institut imeni M.I.Kalinina.  
Predstavlena kafedroy tekhniki vysokikh napryazheniy.  
(Electric power distribution)  
(Electric insulators and insulation)

1. KIZEVETTER, Ye. N., KHARCHEV, M.K.; YASEVICH, V.S.
2. USSR (600)
4. Electric Apparatus and Appliances
7. Distributing 3-10 Kv installations with load circuit breakers. Engrs. Ye.N. Kizevettter, M.K. Kharchev, V.S. Yasevich, Prom.energ. 10 no. 4, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

BELOV, N.N.; BOL'SHAM, Ya.M.; GORDEYEV, A.N.; ORACHEV, V.A.; IERMILOV, A.A.;  
ZALMESSKIY, A.M.; KIELEVETTER, Y.E.; KNOERRING, O.M.; KONSTANTINOV,  
B.A.; KOPYTOV, N.V.; LEVIT, O.O.; MILLER, O.P.; MAYVEL'D, M.P.;  
PRINTSEV, A.A.; SIBBINOVSKIY, O.V.; SOKOLOV, B.A.; STASILOTTS, A.B.;  
TAYTS, A.A.; XHRANUEHIN, A.M.

Mikhail Konstantinovich Kharchev; obituary. Belov and others. Prog.  
energ. 12 no.12:33 D '57. (MIRA 10:12)  
(Kharchev, Mikhail Konstantinovich, 1896-1957)

BUNDAS, Vladimir Vladimirovich; KIZNETZER, Ye.N., retsensent; SEMCHINOV,  
A.M., red.; ZHITNIKOVA, O.S., tekhn. red.

[Calculations in designing electric power supply systems; tables  
and graphs] Raschety pri proektirovanií elektrosvabshenii; tablitsy  
i grafiki. Moskva, Gos. energ. izd-vo, 1961. 155 p. (MIRA 14:7)  
(Electric power distribution--Tables, calculations, etc.)  
(Electric lines)

KIZEVETTER, Ye.N., inzh.; LEVITANSKIY, B.A., inzh.

"Electric equipment of ore-dressing and concentrating plants"  
by M.V. Greisukh. Reviewed by E.N. Kizevettter, B.A. Levitanakii.  
Elektrichesvo no.8:94-95 Ag '61. (MIRA 14:10)  
(Ore dressing--Electric equipment)  
(Gresukh, M.V.)

KIZEVETTER, Ye.N.; KLEYN, P.N.; KHARCHEV, M.K. [deceased]; VOLOBRINSKIY, S.D.; GRODSKIY, S.Ye.; YERMILOV, A.A.; KAYALOV, G.M.; LIVSHITS, D.S.; MAKSIMOV, A.A.; MESHEL', B.S.; MUKOSEYEV, Yu.L.; OGORODNOV, S.I.; ROZENBERG, V.A.; SHRAYBER, L.G.; ZALESSKIY, Yu.Ye., retsentent; IOKHVIDOV, E.S., retsentent; PEDOROV, A.A., retsentent; SAVEL'YEV, V.I., red.; LARIOMOV, O.Ye., tekhn. red.

[Temporary instructions for determining the electrical loads of industrial enterprises] Vremennye rukovodящchie ukazaniia po opredeleniiu elektricheskikh nagrusok promyshlennnykh predpriatii. Moskva, Gosenergoizdat, 1962. 45 p.

(MIRA 16:2)

1. Russia (1923- U.S.S.R.) Glavnoye energeticheskoye upravleniye. 2. Leningradskoye otdeleniye Gosudarstvennogo projektnogo instituta tyazheloy promyshlennosti (for Kisevetter, Kleyn, Kharchev). 3. Komissiya po elektricheskim nagruskam Nauchno-tehnicheskogo obshchestva energeticheskoy promyshlennosti (for Volobrinskiy, Grodskiy, Yermilov, Kayalov, Livshits, Maksimov, Meshel, Mukoseyev, Ogorodnov, Rosenberg, Shrayber).

(Electric power distribution)

KIERSKI, P.

New trends in designing high-pressure switchgear systems, p. 40. (PRZEGLAD ELEKTROTECHNICZNY, Warszawa, Vol. 31, no. 1, Jan. 1955.)

SO: Monthly List of East European Accessions, (EHAL), LC, Vol. 4, No. 6, Jan. 1955,  
Uncl.

Kilcowski, P.

5046. RANGE OF 6 KV DISTRIBUTION IN INDUSTRIAL PLANTS AND IN TOWNS. P.Kilcowski.

Przeglad elektrotech., Vol. 31, No. 7, 453-8 (1965). In Polish.

Direct connection of 6 KV distribution system to 6 KV generator bushings or to 110 KV transmission system through 110 KV/6 KV transformer is compared with a system using intermediate 30 KV subtransmission. Formulas and examples show that ranges at which both systems have equal power losses, or equal operational costs, or use equivalent quantities of copper, aluminum and lead, are not the same for a given set of conditions. Minimum operational costs would normally determine the range chosen.

J.Lukaszewics

*Klizewski P. Problemy zastosowania auto-transformatorow w systemie energetycznym.*

Problems of Application of Auto-Transformers in a Power System.

"Niekłone zagadnienia zastosowania auto-transformatorow w systemie energetycznym". Energetyka, Nr 4, 1966, pp. 216-220, No. 8, LWD, pp. 340-345, 22 figs., 1 tab.

A discussion of properties of the auto-transformers, connection systems and their place in network systems. The author also discusses practical methods of determining the own power of auto-transformers (equivalent power) as well as the influence of inductive reactance on the selection of auto-transformers as regards short-circuits. The article mentions results of experimental work on the influence of overvoltage on the winding of an auto-transformer in various working conditions, and the methods used for protection against overvoltage. The operational economics of transformers and auto-transformers are compared.

*P.W.*

KIZIEWSKI, P.

Some problems of applying automatic transformers in an electric-power system.  
Pt. 2. p. 300.  
(ENERGETIKA. Vol. 10, no. 6, Nov./Dec. 1956.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

KIZIERSKI, P.

Selecting block transformers.

P. 8 (Przeglad Elektrotechniczny. Vol. 32, no. 1, Jan. 1956, Warszawa, Poland)

Monthly Index of East European Accessions (EFAI) LC. Vol. 7, no. 2,  
February 1958

KIZIENSKI, Piotr

Zbigniew Fabierniewicz and Piotr Kizinski, "Utilisation of Existing Systems for Operation at Higher Voltages," Przeglad Elektrotechniczny Vol. 34, No. 2/3, Warsaw, 21 Mar 58, pp 128-133.

JPRS/NY-837, 20 Nov 58.

KIZIEWSKI, P.

Swedish experience in building large transformers. p. 112

ENERGETYKA (Ministerstwo Gornictwa i Energetyki oraz Stowarzyszenie Elektryków Polskich) Bytom, Poland. Vol. 13, no. 4, Apr 1959

Monthly List of East European Accessions (ERAI) LC, Vol. 6, no. 9, September 1959.  
Uncl.

KIZIEWSKI, P.

Rebuilding single-phase 220 kv. transformers into autotransformers. p. 169

ENERGETYKA (Ministerstwo Gornictwa i Energetyki oraz Stowarzyszenie Elektrykow Polskich) Bytom, Poland. Vol. 13, no. 6, June 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, September 1959  
Uncl.

KIZEMSKI, P., mgr inż.

Transformers for the Polish 400 kv. electric network. Energetyk  
Pol 16 no.124375-376 D 1962.

KIZIEWSKI, Piotr, mgr ins.

Development trends of power plants in the Polish power system until 1980. Energetyka Pol 18 no. 2: 31-35 F '64.

1. Instytut Energetyki, Warszawa.

KIZIEWSKI, Piotr, mgr inż.

Selection of 220/110 kv autotransformers for the Polish electric power network. Energetyka Pol 18 no.6:166-168 Je '64.

GOLIK, S.S., inzh. (Kiyev); KIZHAYEV, G.D., inzh. (Kiyev); KARPENKO, A.D., inzh.  
(Kiyev)

Yalta water tunnel. Vod. i san. tekhn. no. 9:8-12 8 '64. (MIRA 17:11)

KIZHAYEV, K.N.

Maintenance of measuring equipment in metallurgical plants. Isn.-  
tekh. no.10:58-59 O '61. (MIRA 14:11)  
(Measuring instruments--Maintenance and repair)

BOKOV, V.A.; MYL'NIKOVA, I. Ye.; KIZHAYEV, S.A.; BRYZHINA, M.P.;  
GRIGORYAN, N.A.

Structure and magnetic properties of  $\text{RiMnO}_3$ . Fiz. tver. tela 7  
no. 12:3695-3698 D '65 (MIR 19:1)

1. Institut poluprovodnikov AN SSSR, Leningrad.

L 15742-66    EMP(u)/EMP(v)/?/EMP(s)/EMP(b)    LTR(e)    JD

ACQ NR: AP6000897

SOURCE CODE: UR/0181/65/007/012/3695/3698

AUTHORS: Bokov, V. A.; Mylnikova, I. Ye.; Kizhayev, S. A.; Bryzhina, M. P.; Grigoryan, N. A.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Structure and magnetic properties of  $\text{BiMnO}_3$

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3695-3698

TOPIC TAGS: bismuth compound, manganese compound, magnetic property, temperature dependence, Curie point, ferromagnetic material, solid solution, ferroelectricity

ABSTRACT: The authors synthesized the  $\text{BiMnO}_3$  in the form of small whiskers, using a technique described elsewhere (FTT v. 6, 1240, 1964) and measured its magnetic properties at temperatures from 55K to room temperature at  $H_{\max} = 9.5$  koe. They found  $\text{BiMnO}_3$  to be a ferromagnet

Card 1/2

Card 2/2 A

L 38887-66 EXP(e)/EWT(m)/EXP(w)/T/EXP(t)/ETI IJP(c) AT/WH/JD/HN/JG  
ACC NR: AP6018577

SOURCE CODE: UR/0181/66/008/006/1957/1959

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TITLE: Magnetic properties of  $PbCo_{0.5}W_{0.5}O_3$  and  $BaNi_{0.5}W_{0.5}O_3$

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1957-1959

TOPIC TAGS: lead compound, barium compound, phase transition, ferroelectricity, antiferroelectricity, magnetic moment, magnetic susceptibility, ferromagnetism, anti-ferromagnetism, magnetic susceptibility

ABSTRACT: This is a continuation of earlier work (Izv. AN SSSR, ser. fiz. v. 29, 929, 1965) where it was found that  $PbCo_{0.5}W_{0.5}O_3$  (I) has two phase transition points connected with electric ordering, becoming antiferroelectric at 305K and ferroelectric at 68K. The present study was made on this substance at low temperatures and also on  $BaNi_{0.5}W_{0.5}O_3$  (II) at liquid-hydrogen temperatures, since the latter had no magnetic phase transitions above room temperatures. The measurements were made with apparatus described by N. M. Kraynes (Dissertation, Institute of Physics Problems, Moscow, 1959). In the case of I the magnetic susceptibility goes through a maximum at 9K. At this temperature a spontaneous magnetic moment is produced, amounting to 0.15 G-cm<sup>2</sup>/g at 4.2K. In the case of II, the susceptibility has a maximum at 55K and no spontaneous magnetic moment was observed. It is concluded from the magnetic mea-

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AS(mp)-2/RAEM(c)/ESD(ga)/ESD(a)-5/RAEM(s)/ESD(t)/RAEM(t) OO  
ACCESSION NR: AP4046616 S/0181/64/006/010/3038/3044.

AUTHOR: Bokov, V. A.; Kishchuk, S. A.; Myshnikova, I. Ye.; Tutov, Yu. G.

TITLE: Antiferroelectric and magnetic properties of  $PbCo_{1/2}W_{1/2}O_3$

SOURCE: Fizika tverdogo tela, v. 6, no. 10, 1964, 3038-3044

TOPIC TAGS: single crystal growth, lead cobalt tungstate crystal, perovskite type structure, ferroelectric crystal, antiferroelectric crystal, paramagnetic crystal, phase transition

ABSTRACT:  $PbCo_{1/2}W_{1/2}O_3$  single crystals were grown from solution in molten  $PbO$ , and their crystal structure, and electric and magnetic properties were determined and compared to those of  $PbMn_{1/2}W_{1/2}O_3$ , which is the only known stable antiferroelectric of the  $A^{\frac{1}{2}}B^{\frac{1}{2}}W_{1/2}O_3$  series of compounds. The x-ray powder patterns indicated a perovskite-type structure with a rhombic unit cell at room temperature and a cubic cell at 30°C, with ordered distribution of  $Co^{2+}$  and  $W^{6+}$  ions. The temperature dependence of the dielectric constant of large single crystals showed a maximum at 32°C, corresponding to the transition from the

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paraelectric (cubic) phase to the antiferroelectric (rhombic) phase. This maximum shifted toward lower temperatures on application of an increasing constant electric field. The observed double hysteresis loops in the antiferroelectric phase, i.e., at low temperatures (below -100°C) when strong electric fields are applied, was correlated with an induced transition from the antiferroelectric into the ferroelectric state. The double hysteresis loop was gradually transformed into a normal loop when temperature was decreased further to -193°C. The transition point into the ferroelectric state in the absence of a field was determined to be ~206°C. The "critical" field, at which the hysteresis loop disappears, was shown to decrease with decreasing temperature. The transition into the ferroelectric state in a strong electric field is possible because of a small difference in the free energies of both states. The antiferroelectric state is more stable in  $PbMn_{1/2}W_{1/2}O_3$  than in  $PbCo_{1/2}W_{1/2}O_3$ , since no double loop was obtained in the former. The temperature dependence of the specific magnetic susceptibility of  $PbCo_{1/2}W_{1/2}O_3$  could not be correlated with the appearance of antiferroelectricity, although a deviation from the Curie-Weiss law was noted below -100°C. The absence of magnetic-phase transitions was deduced, at least in the temperature range above -196°C.

Orig. art. has 6 figures.

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ACC NM: AF3022747  
AUTHOR: Kisharov, S. A.; Tutov, A. G.; Bokov, V. A.

ORG: Institute of Semiconductors AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Structure and magnetic properties of  $TlMnF_3$

SOURCE: Pisika tverdogo tela, v. 7, no. 9, 1965, 2660-2671

TOPIC TAGS: thallium compound, manganese compound, fluoride, x ray analysis, crystal structure, magnetic property

ABSTRACT: Data are given from x-ray and magnetic studies of a new compound,  $TlMnF_3$ . The specimens were produced by mixing saturated aqueous solutions of thallium fluoride and manganese fluoride at 20°C. CuK $\alpha$  and CrK $\alpha$  were used for the x-ray studies with photographic and ionization recording. It was found that the new compound has a perovskite structure. The lattice has a cubic cell with a parameter  $a = 4.250 \pm 0.001$  angstroms. The interplanar spacing and radiation intensities of  $TlMnF_3$  are tabulated for various Miller indices. The magnetic susceptibility of the compound is plotted as a function of temperature from 65 to 520°K. This curve shows a maximum at 85°K which is apparently due to a transition to the antiferromagnetic state. The authors are

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A. N. Lazarev and A. I. Barukov for furnishing the specimens. Orig. art. has: 1  
figure, 5 formulas, 2 tables.

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